

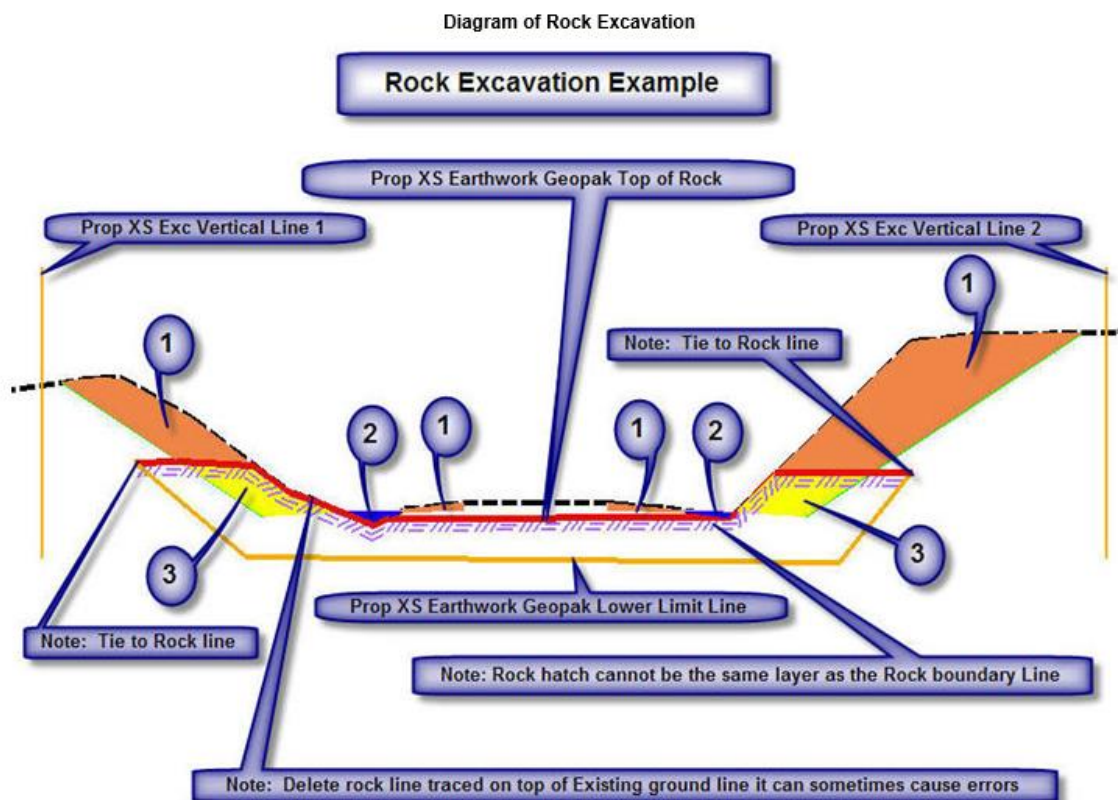
16_51 Calculating Rock Quantities

Question:

How is Roadway Design currently calculating rock quantities from the Geotechnical plans?

Answer:

Our past workflows involve copying the rock and other stratigraphy lines from the Geotech cross-sections into our XSC file. The rest is handled through GEOPAK earthwork input and log files.



330+00.00	SUITABLE					
	Common Exc	①	693.02	931	931	1.00
	Subgrade Exc		0.00	0	0	1.00
	Subsoil Exc		0.00	0	0	1.00
	Fill	②	16.24	34	34	1.00
						3308
	ROCK					
	Common Exc	③	198.85	520	520	1.00
	Subgrade Exc		0.00	0	0	1.00
	Subsoil Exc		0.00	0	0	1.00
	Fill		0.00	0	0	1.00
						3828

Rock excavation quantities are then placed in the X-1A, earthwork balance, and summary sheets. Note that we turn off the rock layers in our XSC file for final plans as agreed upon by the two NCDOT Units.

It is also important to note moving forward that any elements drawn in the cross-sections can NOT be used as part of the earthwork computations in OpenRoads Designer. Traditionally this included rock layers, unsuitable soil stratigraphies, and drainage ditches. Remember that the cross-section is just the by-product of the model, a live “slice” of the model. The list of items mentioned previously are required to be in the 3D model for them to show up in the XSC and be accounted for as a quantity.